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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,816	08/06/2001	Klaus-Leo Wilbuer	SWR-0056	4738

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EXAMINER

KEITH, JACK W

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/856,816

Applicant(s)

Wilbuer et al

Examiner

Jack Keith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 18, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 38-58 is/are pending in the application.
- 4a) Of the above, claim(s) 44 and 48-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-43 and 45-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the international Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6 & 9 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of invention IB, species Ie, Iiii and IBB in Paper No. 16 is acknowledged. The traversal is on the ground(s) that the special technical feature is novel and not disclosed in the prior art. Applicant further argues that the prior art does not disclose a relative movement between the respective surfaces to be coated and the dispersion bath during the coating process. This is not found persuasive. Such will be evident by the rejection set forth below.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 44 and 48-58 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions/species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 16.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 38-43 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang (4,238,299).

Wang discloses applicant's inventive concept (See column 3, lines 10-50). A process for producing a neutron absorption coating on a shielding element. The process comprising: providing a shielding element (18)(stainless steel) base material having predefined surfaces; providing a dispersion bath having a first substance (26)(boron carbide) having a high neutron capture cross-section and a second substance (24)(copper) being an electrolytically metal and the first substance (26) in the form of an electrically conductive compound (i.e., copper/boron carbide). Note that the only difference between applicant's example (see page 10) is the materials used. While Wang does identify the boron carbide as being electrically non-conductive when combined with the copper ions the boron carbide in question is electrically conductive as is evident when the shielding element (18) is exposed to the dispersion bath (copper/boron carbide). One can clearly see via figures 1 and 2a-2d that via gravity the shielding surface (18) is coated with the copper/boron carbide. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

Additionally note that Wang discloses that dispersion bath is intermittently mixed. That is the boron carbide is added slowly over a period of time while mixing the bath, stopping the stirring allowing the boron carbide particles to settle and then introducing more boron carbide and repeating the process.

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After completion of the coating process the shielding material (18) is then removed from the apparatus of Wang where it is repositioned so as to repeat the process on another side of the shielding material (18).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 38-43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ('299) in view of Gerdon et al (5,372,701), Planchamp (4,865,645) and the admitted prior art (see page 7).

As set forth above Wang discloses applicant's inventive concept; however, if not apparent that cadmium can be utilized as the second substance electrolytically precipitable material then Gerdon teaches commonly known electroplating materials such as nickel, copper and cadmium in the electroplating art. With regard to the use of europium as the high neutron capture cross-section material Planchamp teaches commonly known materials having high neutron capture cross-section (i.e., cadmium, boron, europium, hafnium, gadolinium, samarium and dysprosium) in the nuclear radiation absorber art.

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In regard to the material having a high neutron capture cross-section with an augmented neutron capture cross-section applicant admits that is known fact Boron-11 and Boron-10 possess different neutron capture cross-sections. Boron-11 being 80.1 in atomic percent abundance and Boron-10 being 19.9 in atomic percent abundance. Clearly any boron material selected will have an augmented neutron capture cross-section.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted known electroplating materials and high neutron capture cross-section materials, based on the conventional knowledge within the art. In the case of both materials selection can be based on cost, toxicity, etc.. Absorption efficiency is a determining factor in election of the neutron absorber material. Clearly, one skilled in the art would utilize the best materials available based on the determining factors above.

7. Claims 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ('299) as applied to claims 38-43 and 46 above, and further in view of Weinberg (3,411,999).

As set forth above Wang discloses applicant's inventive concept; however, Wang does not disclose the use of a glass vessel or the use of ultrasound as the mixing medium for the dispersion bath. Weinberg teaches the use of a glass vessel and ultrasound as the mixing medium in the electrolytic art (see entire document).

Modification of Wang to have include the vessel construction and mixing teachings of Weinberg would have been obvious to one having ordinary skill in the art at the time the

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invention was made as such results are in no more than the use of conventionally known equivalents within electroplating art as is evident by the teachings of Weinberg.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Both Banks and Burks discloses mechanical, vibration and ultrasonic methods of mixing electrolytic solutions.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Keith whose telephone number is (703) 306-5752. The examiner can normally be reached on Monday through Friday from 7:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198.

The fax phone number for the organization where this application or the proceeding is assigned is (703) 305-7687. Fax number for submittals before Final is (703) 872-9326, After Final is (703) 872-9327 and customer service is (703) 872-9325.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

A handwritten signature in black ink, consisting of a stylized 'J' and 'K' with a large loop, positioned above the printed name.

Jack Keith  
Examiner,  
Art Unit 3641

jwk

August 13, 2003